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U. S. Department of Agriculture

COLORADO

HARDY

CACTI

LAS ANIMAS FLORAL CO.

LAS ANIMAS , COLORADO

Colorado has cacti in considerable abundance and our species are almost all new in collections. "A New Manual of Rocky Mountain Botany" by Coulter and Nelson lists the following:

Mamillaria	-----	4 species
Echinocactus	-----	3 species
Echinocereus	-----	5 species
Opuntia	-----	11 species

We do not handle all of these 23 kinds since some are rare and others are so nearly alike that there is no reason for handling several.

All cacti native to Colorado grow in a high altitude with hot dry summers and cold variable winters. Our cacti are frost hardy and withstand cold as extreme as 30 degrees below zero when in wilted condition. They become firm again with the warm spring rains. It is reasonably safe to say that Colorado cacti will withstand the cold in many regions. In their native state there is little winter moisture so that in moist climates they will need protection against too wet a soil. They should enter winter in a somewhat wilted condition, accomplished by withholding some water. Give as much strong sunlight as possible. Cacti are of easy culture and give a wealth of blossom and an interesting plant growth for a minimum of attention. The natural soil is dry and low in organic material but yet fertile. Much is written about soil for cacti but remembering the above will enable a person to use something at hand. Clays hold too much water, coarse sand not enough water. Most soils between these extremes can be used if well drained. Cactus soil should be free from a lot of fresh organic matter, yet a little well-rotted organic matter and some commercial fertilizer is good since the cacti naturally grow on a fertile soil. Give a cactus good drainage and water infrequently, in winter especially. Yet do not expect a cactus to thrive without water. They need more water in a pot than when planted in the open. A good idea for a potted plant is to set the pot on a saucer well filled with sphagnum or peat moss. A cactus can be killed by drouth but a temporary lack of water fits the natural conditions better. Ours

naturally receive about 12 inches of rainfall annually. Planted in the open in drier climates they will shift for themselves. In moist climates out of doors, plant on an elevation of light soil so that rotting will not occur thru poor drainage.

The kinds of cacti naturally fall into two groups. The Ball Cacti do not branch and never have leaves. They consist of a dome shaped stem, and all are smaller than 6 inches high. The rest of our cacti are in the genus *Opuntia*. These have small leaves on the new growth that fall off about the time the spines start growing. The *Opuntias* get larger and are either tree-like in growth or else have flat oval shaped stems or Prickly Pear type of growth.

#### BALL CACTI

Mamillaria (Coryphantha) vivipara is quite dome shaped growing over 3 inches in diameter and the same in height. The flowers are an inch in diameter and bright purple. The green spineless fruit has a very attractive fruity flavor. This species is easily grown as it really grows better in a climate that is more moist than ours. Technically the plant is covered with tubercules (nipple like)  $\frac{3}{4}$  by  $\frac{5}{16}$  inches, grooved on the upper side. On the tip are 12-20 white spines with brown tips. Four central spines are longer and heavier and quite brown. Flowers arise from between the tubercules at the top of the plant. Seeds are brown and flat.

Echinocereus viridiflorus grows 3 inches high by 2 in diameter. The spines are borne on ridges. The yellow flowers appear profusely in June and remain open several days. This is an excellent cactus that grows readily under a wide range of conditions from hot prairies to 7,000 feet altitude. Technically the spines are borne on slight tubercules arranged in about 13 vertical or spiral ridges. The radial spines are 12-18 of variable length and color, mostly being white with the longer ones red tipped. There is usually one stout red central spine which may be white or absent. The fruit is oval, spiny, and green. The seeds are dark and round.

Echinocereus caespitosus is some 3-4 inches tall and pointed cylindrical. The spines are borne on vertical ridges and densely cover the plant. The bright purple flower is quite large for so small a plant. It is  $1\frac{1}{2}$  inches in diameter and as showy as an *Opuntia* blossom. The fruit is dry and spiny. Technically the spines number 13-20 per tubercule and are all radial. Since there is no central spine the plant is not prickly. The spines are short, white, and purple tipped. The fruit splits when ripe and the seeds are round and dark colored.

Echinocactus (Pediocactus) simpsoni looks very similar to *Mamillaria vivipara*. This is a new species that we are adding to our list this year. It is a high altitude species that blooms very early in the spring with an abundance of pink blossoms  $\frac{3}{4}$  inch across. Technically this cactus is separated from *Mamillaria* by lacking the groove on the tubercule and by having a spiny fruit. The flowers arise from a white wooly area on the tip. The fruit splits when ripe and the round black seeds fall out. Spines are more numerous than on *Mamillaria*, not so stout, and purplish red.

Echinocereus gonacrotus is a new species we are adding to our list this season. It is a rarer kind, larger than the rest, attaining 6 inches in height by  $2\frac{1}{2}$  inches in diameter. It has heavy straw colored spines. The blossom is bright red with very thick petals. Fruit and seed are unknown. There is mystery for you. How does this kind get ahead in the world without seed to start new plants? Technically the spines are borne on tubercules set in ridges 8-10 in number. There are 6 radial and one central spine. All spines are roughly four sided in contrast to the rest of the cacti which have round spines.

#### OPUNTIA

All members of *Opuntia* are larger and branched. The blossoms are large and showy, most being  $2-2\frac{1}{2}$  inches in diameter. Most of the fruits are large, all are heavily spined, and while some are dry, others are fleshy and quite edible. All *Opuntias* are hardier than other cacti, regardless of what genus or where they grow. The pioneers of the cactus group

are all Opuntias.

Opuntia arborescens is a shrub attaining 5-6 feet in height. It has cylindrical branches with each season's growth 5-6 inches long. Each spine is covered with a straw colored sheath that later comes off leaving the spine clean. Therefore this is a "cholla". None of the prickly pears have this spine sheath. Larger plants flower freely and present a mass of large purple flowers. The fruit which follows is bright yellow and an inch in diameter. It remains attached and in full color a year or more. This is an excellent cactus, showy as large plants but attractive also as a smaller potted plant. Technically the slight tubercles are close set. Each tubercle has 8-30 spines with 1-8 considerably longer so that spines bristle in every direction. Fruit is tubercled and spiny. Seeds are large and whitish.

Opuntia polycantha, Prickly Pear. This is naturally a creeping plant 6 inches high and several feet in diameter. It is made up of series of flat oval stems 4-6 inches long. There are several small white spines and several longer brown ones, all pointing down. The large flowers are clear yellow. This is undoubtedly the hardiest cactus found from hot deserts to almost the Canadian Border. Technically this species is distinguished by heavy spines, yellow flowers followed by a dry fruit in which the whitish seeds are so crowded as to be out of shape.

Opuntia humifusa is similar to the above with orange-yellow flowers. It has fewer spines and the color is a bright green, unlike other cacti. This cactus is naturally a lover of a more humid climate than ours and is hardy. Technically, in addition to the above the species is distinguished by the fruit. This is purple, fleshy, and filled with a purple pulp in which the seeds are embedded. The fruit is quite edible.

Opuntia rhodantha is indistinguishable from O. polycantha except in flower. The flower is purple red with red stamens and is very attractive. This species is not as common as the others in the wild but is vigorous and hardy.

Opuntia fragilis is a small prickly pear with smaller joints that vary in size and shape. The yellow flower is seldom seen. Instead the end joints are very loosely attached and break off at a touch. These get kicked around and can lay for weeks without drying up. Then when it rains they promptly send out new roots and we have another plant. This smaller cactus is very cold hardy and naturally grows in colder regions than any other except O. polycantha.

Most nurseries have Yucca filamentosa. In spite of the claims made for it, that species is not completely hardy. The only truly hardy species is Yucca glauca which naturally grows as far north as northern Montana and yet is found far south into Texas. It grows abundantly here in Colorado under the driest of conditions but is usually found on sandier soils. This yucca is rather large to ship as potted plants, altho this is possible. The large flat black seeds germinate readily and are not hard to grow. We offer these to our customers.

Sedum Stenopetalum is a native sedum from the Rocky Mountains. The plant growth is low and unlike the usually offered species and the blossoms are clusters of yellow stars.

Few plants have the power of motion and many of these move very slowly. Cactus however are unique in being able to move certain parts and do it quickly. The stamens of a cactus blossom can move. Touch a fresh flower and the stamens crowd around the point of contact and then relax. Wild bees attracted by nectar are trapped by this movement and dusted with pollen. The bees may carry pollen to another flower and fertilize it. The same flower will repeat the movement several times.

#### SEEDS

We do not have seeds of all cacti and in some fruit and seed are unknown. We have packets of the following: Mamillaria vivipara, Opuntia arborescens, rhodantha, humifusa, and polycantha. Then we have a very limited quantity



of *Echinocereus viridiflorus* and *Echinocactus simpsoni*. We also offer mixed cactus seed and include a few seeds of *Yucca glauca*, or we offer the *Yucca* alone.

We are growing a great many desirable wild flowers that are well worth growing in many gardens. They will add something new and attractive to the usual garden of annuals and perennials. Most of these new Colorado flowers will make enough of a seed crop so that we can offer seed for next year and the year following.

#### PRICE LIST

Cacti and seeds are shipped prepaid. Our cacti are grown and shipped in pots. This makes it unnecessary for the cactus to readjust itself after shipment. Such shipping only slightly increases the cost of plants and the chances of loss are minimized. Our catalog is simple because after all the catalog will not grow. What the catalog lacks we are able to add to the quality of the plants you receive.

<i>Mamillaria vivipara</i> -----	\$ .30
<i>Echinocereus viridiflorus</i> -----	.25
<i>Echinocereus caespitosus</i> -----	.30
<i>Echinocereus gonacanthus</i> -----	.40
<i>Opuntia arborescens</i> -----	.30
<i>Opuntia polycantha</i> -----	.35
<i>Opuntia humifusa</i> -----	.35
<i>Opuntia rhodantha</i> -----	.35
<i>Opuntia fragilis</i> -----	.25
<i>Echinocactus simpsoni</i> - -----	.30
 <i>Sedum stenopetalum</i> -----	 .25

Cactus and *Yucca* seeds are 5¢ a packet, either by species or as mixed seed.

